Explanatory Notes:—

(1) This excludes potential for Solar Power which is dependent on future developments making solar technology cost-competitive for grid power applications.

(2) Taking into account sites with wind densities of 250 W/m$^2$ or higher with 3% of assessed area available for wind farms requiring 12 ha/MW. The technically feasible potential for grid-interactive power could be lower if sites with wind densities of 300 W/m$^2$ or higher are considered as suitable in keeping with international practice.

(3) This excludes a potential of 45,000 MW from around 20mha of wastelands yielding 10MT/ha/annum of woody biomass giving 4000 k-cal/kg with system efficiency of 30% and 75% PLF. In order to realize this estimated potential a major inter-Ministerial initiative involving, among others, Agriculture, Rural Development, Panchayati Raj, Environment & Forests would be required.

Includes potential of 16000 MW based on surplus agro-residues. In practice biomass power generation units prefer to use forest-residues for techno-economic reasons.

**Projects under Village Energy Security Programme for Orissa**

2030. MS. PRAMILA BOHIDAR:
SHRI B.J. PANDA:

Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether Government have sanctioned additional projects to Orissa under Village Energy Security Programme;

(b) the total number of such projects that have been sanctioned in Orissa;

(c) how many out of these have been distributed to tribal belts; and

(d) the action plan of Government to light up all the villages in the State which are not accessible through grid power?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) and (b) A total of ten test projects on village energy security have been sanctioned in Orissa.

(c) Eight of the ten test projects are located in tribal belts. Of the remaining two, one village is dominated by tribals and the other by Scheduled Caste population.

(d) Under a project supported by the Ministry,18 villages were electrified in Orissa in the year 2002-03. However, from 2005-06 onwards under the Remote Village Electrification (RVE) Programme of the Ministry, financial support is provided to States for electrification through non-conventional energy sources of all those unelectrified census villages/ unelectrified hamlets of electrified census villages, which are identified by Rural Electrification Corporation (REC) and not likely to receive grid connection. 151 such villages have so far been identified in Orissa. Orissa Renewable Energy Development Agency (OREDA) has informed that detailed project reports for electrification of remote unelectrified census villages identified by REC will be submitted in a phased manner. Financial support for projects for their electrification through non-conventional energy sources can be considered by the Ministry, once proposals along with necessary documents as per the requirement of RVE programme are received from the State.

**Energy from biomass in the country**

2031. SHRI T.T.V. DHINAKARAN: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) the total quantum of energy generated from biomass in the country, State-wise;

(b) the annual availability of biomass in the country, State-wise;

(c) the percentage of biomass exploited for power generation so far; and

(d) the steps taken to exploit all the available biomass resources in the country?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) Annual generation of about 4400 million units of electricity is estimated from biomass based power projects of 1050 MW installed in the country. The State-wise information about the installed capacity of biomass based electricity generation projects upto 30th June, 2006 is enclosed as Statement (*See* below).